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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,016	12/10/2003	Minjie Lin	33280	7499

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EXAMINER	
LE, DEBBIE M	

ART UNIT	PAPER NUMBER
2168	

DATE MAILED: 11/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/733,016	LIN ET AL.	
	Examiner	Art Unit	
	DEBBIE M. LE	2168	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 September 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Applicants's arguments filed on 9/7/06. Claims 1, 9, 14, 16-19, 20-22 are amended. Claims 1-23 are pending for examination.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Butehorn et al (US Patent Application publication no. 2004/0132451 A1).

As per claim 1, Butehorn discloses a method performed within a router for distributing routing information within the router, the method comprising:

receiving a set of addresses from a client indicating route updates of interest to the client and a set of types of routing changes that are of interest (as receives routing information from one of the terminals, wherein the routing information specifies reachability of a host that is within a data network served by the one terminal) (parg. 0014);

maintaining one or more data structures including information corresponding to the set of addresses and the set of types of routing changes that are of interest (as the route server modifies a database storing routes reachable over the satellite network based on the routing information, i.e., route table) (parg. 0013);

receiving a particular route update (as receiving an update from a route client for a delete route) (parg. 0093); and

notifying the client of the particular route update in response to identifying the particular route update corresponds to both at least one address in the set of addresses and at least one routing attribute in the set of types of routing changes that are of interest (as message is transmitted to the terminals based on the modified route table for updating of respective route table of the terminals) (parg. 0014);

wherein the device includes said one or more client (as a satellite terminal 205 couples to an end-host 201, para, 0069).

As per claim 2, Butehorn teaches wherein said at least one routing attribute includes a change in an interface for reaching an address in the set of addresses (parg. 0040, last 4 lines).

As per claim 3, Butehorn teaches wherein said notifying the client of the particular route update includes notifying the client of the address (parg. 0057).

As per claim 4, Butehorn teaches wherein said at least one routing attribute includes a change in a path from the router to an address in the set of addresses (parg. 0049, last 6 lines).

As per claim 5, Butehorn teaches wherein the address is directly reachable from the router (parg. 0040, last 3 lines).

As per claim 6, Butehorn teaches wherein said at least one routing attribute includes a change in whether an address in the set of addresses is directly reachable or is not directly reachable (parg. 0066-0067, 0090).

As per claim 7, Butehorn teaches wherein said at least one routing attribute includes a change in a distance to reach an address in the set of addresses (parg. 0043).

As per claim 8, Butehorn teaches wherein said at least one routing attribute includes a change in a cost metric to reach an address in the set of addresses (parg. 0070).

As per claim 9, Butehorn discloses a method performed within a device for distributing routing information within the device, the method comprising:

receiving a first set of addresses from a first client indicating route updates of interest to the first client and a first set of types of routing changes that are of interest to the first client (as receives routing information from one of the terminals, wherein the routing information specifies reachability of a host that is within a data network served by the one terminal parg. 0014, and 0057, satellite context identifier which uniquely identifies the customer for a region which is equivalent to a first or a second set of addresses);

receiving a second set of addresses from a second client indicating route updates of interest to the second client and a second set of types of

routing changes that are of interest to the second client (as receives routing information from one of the terminals, wherein the routing information specifies reachability of a host that is within a data network served by the one terminal) (parg. 0014) and (satellite context identifier which uniquely identifies the customer for a region (parg. 0057) which is equivalent to a first or a second set of addresses);

maintaining one or more data structures including information corresponding to the first and the second sets of addresses and the first and the second sets of types of routing changes that are of interest (as the route server modifies a database storing routes reachable over the satellite network based on the routing information, i.e., route table) (parg. 0013) and (parg. 0063 that a network operation center (hereinafter "NOC") provides an address server, which contains a database of all the satellite MAC addresses assigned to all customer networks supported by satellite for each satellite in a given region);

receiving a particular route update (as receiving an update from a route client for a delete route) (parg. 0093) and (parg. 0110, "Route Change Update);

performing one or more lookup operations on said one or more data structures to identify a result corresponding to the particular route update (as table lookups or using queries address server to the NOC, parg. 0054), the result identifying the first client but not the second client, and the particular route update corresponding to a particular type of routing change identified in the first set of types of routing changes that are of interest (as a route server disseminates the collects routes to the terminals for updating of their respective route tables according to the Satellite Context Identifier, which is uniquely identifies the customer for a region) (abstract, last 6 lines) and

notifying the first client but not the second client of the particular route update in response to the result identifying the first client but not the second client (parg. 0063 that a network operation center (hereinafter "NOC") provides an address server, which contains a database of all the satellite MAC addresses assigned to all customer networks supported by satellite for each satellite in a given region, parg. 0057, wherein Satellite Context Identifier which uniquely identifies the customer for a region); and

the particular route update corresponds to a particular type of routing change identified in the first set of types of routing changes that are of interest (as message is transmitted to the terminals based on the modified route table for updating of respective route table of the terminals) (parg. 0014, 0012);

wherein the device includes the first client and the second client (as a satellite terminal 205 couples to an end-host 201, para, 0069).

As per claim 10, Butehorn teaches wherein said one or more data structures maintains a single set of types of routing changes that are of interest to the first and the second clients based on the first and the second sets of types of routing changes that are of interest (parg. 0188).

As per claim 11, Butehorn teaches wherein said information maintained by said one or more data structures identifies different states of interest by clients, wherein said different states of interest include: whether the first client, the second client, both the first and second clients, and neither the first or second client are interested in a particular type of routing change (parg. 0189, i.e., route change update message and format of

a route change update entry, wherein route change update messages also includes satellite context identifier).

As per claim 12, Butehorn teaches wherein a single indication of said different states of interest by clients is maintained for all of the addresses in the first and second sets of addresses (parg. 0105, 0125).

As per claim 13, Butehorn teaches wherein an indication of said different states of interest by clients is maintained for each address of said first and second sets of addresses (parg. 0105, 0125).

As per claim 14, Butehorn discloses a method performed within a device for distributing routing information within the device, the method comprising:

maintaining a data structure of route dependencies (Fig. 8A, i.e., next hub network address) including routes of interest to one or more clients (as Satellite Context Identifier, which is uniquely identifies the customer for a region) (Fig. 8A, parg 0057);

receiving a routing update identifying a particular route (as receiving an update from a route client for a delete route) (parg. 0093) and (parg. 0110, "Route Change Update);

identifying that no client of said one or more clients has subscribed to receive an update corresponding to the particular route; identifying a second particular route dependent on the particular route; identifying a particular client of said one or more clients has subscribed to receive an update corresponding to the second particular route (as IRSRP redirect routing provides point-to-point fashion to another ST port the proper route) (parg. 0086); and

notifying the particular client of the update to the particular route in response to said identifying the particular client has subscribed to receive an update corresponding to the second particular route (as IRSP redirect routing message within an ST port is defined as an ISRP redirect client) (parg. 0086);

wherein the device includes said one or more clients (as a satellite terminal 205 couples to an end-host 201, para, 0069).

As per claim 15, Butehorn teaches identifying a change corresponding to the second particular route matches a types of routing changes that are of interest to the particular client; and wherein said notify the particular client is performed in response to said identifying the particular client has subscribed to receive an update corresponding to the second particular route and said identifying the change corresponding to the second particular route matches a types of routing changes that are of interest to the particular client (parg. 0070, 0072).

Claims 16, 17 are rejected under the same rationale as state in independent claim 1 arguments.

Claims 18, 20 and 22 are rejected under the same rationale as state in independent claim 14 arguments.

Claims 19, 21, and 23 have the same limitations as claim 15, therefore, they are rejected under the same subject matter.

Response to Arguments

Applicant's arguments filed 9/7/06 have been fully considered but they are not persuasive.

Applicants argue that Butehoen does not teach wherein the router includes the client because Butehorn is directed to distributing routing information among different devices in a network, while "Applicant's claims are directed to distributing routing information in a single device".

In response, the examiner respectfully disagrees. Butehorn discloses as follows: intra-domain routing information (para. 0012, lines 1-4). A network device capable of performing routing functionalities (e.g., a router, a satellite terminal) examines the destination IP address of a received packet (para. 0049, lines 3-6, 0054, lines 1-3). Specifically, Butehorn not only teaches distributing routing information among different device in a network as a satellite terminal dynamically exchanges routing information **within a customer's network** and exchange routing information **between customer's network**. The protocols that exchange routing information **within a "domain" or customer's network** are referred to as **interior** routing protocols, but Butehorn also teaches that if static route, an end-host 201 (as a client) (see Fig. 2) designates the satellite terminal 205 as the default router, in fact, the satellite terminal 205 is the destination device (as a router) (para. 0074, lines 1-2). Thus, Butehorn does teach the claim language "wherein the router (as a satellite terminal 205) includes the client (as an end-host 201). In another word, the static route taught by Butehorn teaches in Figure 2 that the end-host designates the system includes an **end-host 201** (as a client) couples

(as includes) to **a satellite terminal 205** (as a router). Accordingly, it is clearly that Butehorn teaches the claim limitation "wherein the router includes the client", or similarly to Applicants' argument "claims are directed to distributing routing information in a single device" because the network device 205 recites the client 201 for receiving packet enter from the client 201.

Second, Applicants demand that the examiner must shows the evidence that Butehorn teaches that its routing information includes both "route updates" and "type of route changes". Applicants argue that Butehon fails to specifically providing teaching, for example, the claims refers to "route updates and "types of route changes" as listing in the original specification (page 17, lines 11-14): notify in change in route, notify on change or reachability information, notify on change of nexthop address or interface, notify on change of hop distance, etc.

First, the examiner respectfully notes that the limitation "its routing information includes both" does not recite in the rejection claims. At best, the claim recites "receiving a set o of addresses from a client indicating" would be understood equivalent to Applicants's argument "its routing information includes". If it is truly corrected, this limitation has been addressed in the detailed Office Action mailed date April 7, 2006, and again rejection in the detailed Office Action above. Secondly, the examiner respectfully submits that Applicants misinterpret the principle that claims are interpreted in light of the specification. Although these elements "notify in change in route, notify on change or reachability information, notify on change of nexthop address or interface, notify on change of hop distance, etc" are found as examples or embodiments in the

specification, they were not claimed explicitly. It is the claims that define the claim invention, and it is claims, not specification that are anticipated or unpatentable. *Constant v. Advanced Micro-Devices Inc.,* 7 USPQ2d 1064. In this particular, Butehorn does teach "route updates" as equivalent to a route updated sent by the client for deleted route and wherein types of route changes would be equivalent as routing information specifies reachability of host. (Butehorn, para. 0014) (as similarly to Applicants' above argument "notify on reachability information." (list in specification page 17, lines 11-14).

Finally, Applicants argue that the external trigger of paragraph 134 which does not suggest the notification of the client is triggered in response to the route update matching the registered address and routing attribute.

In response, the examiner submits that the paragraph 134 is a trigger to notify the terrestrial routing protocol of a routing table. The examiner relies on paragraph 14 for the step of 'notifying the client of the particular route update in response to identifying the particular route update corresponds to both at least one address and at least one types of routing change that are of interest' as message is transmitted to the terminals based on the modified route table for updating of respective route table of the terminals, as laid out in the detailed above and the Office Action mailed date April 7, 2006.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

The prior art made of record, listed on form PTO-892, and not relied upon, if any, is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DEBBIE M. LE whose telephone number is (571) 272-4111. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Vo can be reached on (571) 272-3642. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DEBBIE LE
PRIMARY EXAMINER
11/13/06